Journal and country rankings in instrumentation and ocean engineering

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Abstract - The purpose of this paper is to highlight scientific information resources that list journal and country rankings. These databases usually focus on the use of citation counts and number of publications to evaluate the interest, visibility and impact of research performance. The exposed resources are platforms that provide added value to authors improving their knowledge about research trends and also where to submit their papers.

Keywords – Journal rankings, Country rankings, Visibility, Citation analysis, Bibliometric evaluation, Journal performance

I. INTRODUCTION

This paper pretends to introduce the researchers and users of bibliographical databases to the journal and country rankings provided principally by two selected resources.

II. EXPOSED RESOURCES

Journal Citation Reports :

It's the most important ISI's analytical resource, using different metric tools like *Impact Factor*, *Immediacy Index* and *Eigenfactor*. Updated every year and covering data source from 1997, provides reports about almost 8.000 scientific journals previously indexed by *ISI Web of Knowledge*.

Fig. 1: Thomson Reuters JCR's logo

Research community members can evaluate and compare the impact and influence of these leading journals with different metric tools to decide, for instance where to publish his works and confirm the preferred journals status. JCR can show the most frequently cited journals, highest impact and largest journals in a field. In sum, serves to evaluate research output.

SCImago :

Open access resource retrieving data source contained in the already mentioned *Scopus* database. It's a result of the collaboration between *Scimago Research Group* and *Elsevier* and using the *Google PageRank* algorithm analyzes rank and compares scientific journals and country status.

Fig. 2: SCimago's logo

Provides users indicators like *Scimago Journal Rank (SJR)* and author's h-index calculated with the *PageRank* of the journals indexed by *Scopus*.

Like JCR it's updated yearly but covers information from 1999 to the previous current year due to its open access condition. To search for the very current year users must to consult *Scopus* database.

III. JOURNAL RANKINGS BY JCR

Next are listed the ranking of the first ten journals with greater impact, according to ISI 2010 data, distributed by four relevant Martech subject categories by ISI criterion too:

Category: Instruments & Instrumentation

Title	ISSN	Impact Factor	Quartile Rank
Laser physics letters	1612-2011	6.010	Q1
Applied spectroscopy reviews	0570-4928	3.686	Q1
Microfluidics and nanofluidics	1613-4982	3.504	Q1
IEEE Transactions on industrial electronics	0278-0046	3.439	Q1
Sensors and actuators b-chemical	0925-4005	3.368	Q1
Journal of instrumentation	1748-0221	3.148	Q1
Journal of synchrotron radiation	0909-0495	2.335	Q1
Journal of micromechanics and microengineering	0960-1317	2.276	Q1
Chemometrics and intelligent laboratory systems	0169-7439	2.222	Q1
Structural health monitoring-	1475-	2.115	Q1

an international journal	9217		

Category: Ocean Engineering

Title	ISSN	Impact Factor	Quartile Rank
Journal of atmospheric and oceanic technology	0739-0572	1.860	Q1
Coastal engineering	0378-3839	1.624	Q1
IEEE Journal of oceanic engineering	0364-9059	1.402	Q1
Ocean engineering	0029-8018	0.954	Q2
Applied ocean research	0141-1187	0.859	Q2
Marine technology society journal	0025-3324	0.739	Q2
Journal of waterway port coastal and ocean engineering-asce	0733-950x	0.603	Q2
International journal of offshore and polar engineering	1053-5381	0.529	Q3
Coastal engineering journal	0578-5634	0.472	Q3
Marine georesources & geotechnology	1064-119x	0.452	Q3

Category: Marine Engineering

Title	ISSN	Impact Factor	Quartile Rank
Journal of navigation	0373-4633	0.691	Q1
Marine structures	0951-8339	0.594	Q1
Journal of marine science and technology	0948-4280	0.519	Q2
Journal of ship research	0022-4502	0.317	Q2
Marine technology and sname news	0025-3316	0.292	Q2
Proceedings of the Institution of Mechanical Engineers Part M-Journal of Engineering for the Maritime Environment	1475-0902	0.259	Q3
Naval engineers journal	0028-1425	0.138	Q3
Polish maritime research	1233-2585	0.114	Q3
Journal of marine engineering and Technology	1476-1548	0.087	Q4
Brodogradnja	0007-215X	0.037	Q4

Category: Oceanography

Title	ISSN	Impact Factor	Quartile Rank
Annual review of marine science	1941-1405	15	Q1
Oceanography and marine biology	0078-3218	8.571	Q1
Paleoceanography	0883-8305	4.030	Q1
Limnology and oceanography	0024-3590	3.385	Q1
Progress in oceanography	0079-6611	3.269	Q1
Marine chemistry	0304-4203	2.751	Q1
Dynamics of atmospheres and oceans	0377-0265	2.674	Q1
Marine geology	0025-3227	2.517	Q1
Marine ecology-progress series	0171-8630	2.483	Q1
Journal of physical oceanography	0022-3670	2.481	Q1

IV. COUNTRY RANKINGS BY SCIMAGO

Next are listed the ranking of the first twenty countries with most publications, according to SCImago 2010 data, distributed by three relevant Martech subject categories by SCImago criterion too:

Category: Instrumentation

Country	Documents	Citations	H index
United States	22.495	174.620	114
China	14.531	29.264	45
Germany	11.079	95.518	86
Russian Federation	10.952	40.534	57
Japan	9.599	64.713	62
Italy	7.316	48.128	61
United Kingdom	6.857	56.198	73
France	6.220	52.572	66
Switzerland	3.767	39.273	64
Canada	2.995	24.835	57
Netherlands	2.437	23.356	62
Spain	**2.297**	**18.471**	**45**
Australia	1.905	15.274	44
India	1.904	12.362	30
South Korea	1.861	12.407	42
Sweden	1.833	16.968	53
Poland	1.822	14.100	47
Belgium	1.818	16.365	48
Brazil	1.625	8.453	31
Taiwan	1.542	12.284	42

Category: Ocean Engineering

Country	Documents	Citations	H index

United States	7.584	48.643	69
China	6.281	5.855	21
Japan	3.660	8.199	29
United Kingdom	3.008	11.854	39
Germany	2.285	5.347	29
South Korea	1.992	3.085	21
France	1.570	5.922	31
Norway	1.459	3.012	24
Taiwan	1.370	2.899	19
Canada	1.232	6.012	33
Australia	980	5.337	30
Italy	918	5.210	32
India	814	1.997	19
Netherlands	808	3.622	27
Turkey	805	2.104	18
Brazil	706	1.092	15
Croatia	664	240	6
Russian Federation	467	958	14
Portugal	434	1.862	21
Spain	**405**	**2.299**	**25**

Category: Oceanography

Country	Documents	Citations	H index
United States	43.409	769.620	192
United Kingdom	11.098	162.155	110
Germany	8.895	146.145	112
France	8.356	139.916	116
Japan	7.436	84.406	88
Canada	6.983	106.210	105
Australia	6.028	71.681	86
Russian Federation	5.388	29.605	58
China	4.636	30.609	60
Spain	**3.987**	**44.085**	**66**
Italy	3.958	49.519	76
Netherlands	3.311	55.662	81
Norway	2.638	34.452	65
India	2.169	12.860	43
New Zealand	2.089	25.913	57
Sweden	2.053	30.994	63
Taiwan	1.982	12.998	45
Brazil	1.700	17.189	52
Belgium	1.695	24.277	61
Denmark	1.672	27.896	67

V. CONCLUSIONS

First, considering the ISI criterion about the way to divide the thematic categories, we can observe that some journals appears in various classifications, but in a different position, identified by the quartile, in his category rank. ISI's Impact Factor provide relevant information to authors about the importance of every journal and gives they some indication for were to publish they works.

Second, observing the country ranks authors can see which countries are leading de research in similar thematic areas classified by Scimago. Country rankings calculates H index combining published documents and citations received in this documents. Taking into account the chosen categories, authors can observe the rank position of their preferred countries. Focusing the case in the ranking of Spain we can see that this country is relatively well positioned in Instrumentation and Oceanography but not much in Ocean Engineering.

Finally and to conclude, these two resources can provide authors relevant data information and help them make decisions for their research.

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